IN THE SPECIFICATION:

Please amend paragraph [0001] as follows:

The present invention is related to an ablative baffle for a liquid rocket engine thrust chamber, and more particularly, to an ablative baffle for a liquid rocket engine thrust chamber, which has the capability of reducing the combustion instability of a specific acoustic mode, which is generated during combustion inside a combustion-chamber of a liquid rocket engine thrust chamber.

Please delete the subheading between paragraphs [0001] and [0002] and replace with the following subheading:

DESCRIPTION OF THE RELATED ART

Please amend paragraph [0002] as follows:

A liquid rocket engine thrust chamber ~~obtains~~ develops thrust by ejecting high temperature and high pressure gas, which is produced from combustion of liquid propellant injected into the combustion chamber.

Please amend paragraph [0003] as follows:

Such a liquid rocket engine thrust chamber has a high probability of combustion instability of specific frequencies in the spectrum, which may be generated during combustion

inside the combustion chamber. Generation of combustion instability and amplification thereof cause the fatal problem of engine failure and worsen the reliability of the liquid rocket engine.

Please amend paragraph [0004] as follows:

Recently, the technique of using acoustic cavities or ~~baffle is~~ baffles has been suggested to improve the combustion stability of liquid rocket engine thrust chamber.

Please amend paragraph [0005] as follows:

Firstly, [[an]] acoustic cavities are used for damping the resonance frequency of the combustion chamber by forming the space of predetermined shape in the head part, which is located in the upper part of the thrust chamber or combustion chamber. Next, a baffle is mounted on the surface, on which injectors are located, and controls the radial and/or tangential flow of combustion gas so that the resonance frequency may be damped.

Please amend paragraph [0006] as follows:

The technique of ~~baffle~~ using baffles is generally used to reduce combustion instability. However, the technique has a problem in that a baffle is melted or damaged because it is mounted inside the combustion chamber where high temperature and high pressure combustion gas reside ~~are resided~~. When combustion instability occurs, even other apparatuses and parts, which are connected with an engine, could be damaged.

Please amend paragraph [0007] as follows:

A cooling method with propellant, which passes through cooling fluid passages in a baffle to prevent the temperature of the baffle from rising over the predetermined temperature, is generally used to protect a baffle from ~~melting or/and~~ being melted and/or damaged ~~damaging~~.

Please amend paragraph [0008] as follows:

This method has a problem in that a manufacturing method is complicated and an additional pressurizing device to inject propellant at high pressure is needed. Furthermore, the system of the engine and the entire launch vehicle may become complicated. Another method to inject propellant at high pressure without any additional device is by pressurizing a propellant tank with high pressure. This method has a fatal problem of thickening tank walls in order to endure high pressure, which increases the weight of the tank and the weight of the launch vehicle and decrease the performance of launch vehicle.

Please amend paragraph [0010] as follows:

An object of the present invention is to provide an ablative baffle for a liquid rocket engine thrust chamber, which has the capability of ~~reduction of~~ reducing combustion instability by a predetermined geometrical shape.

Please amend paragraph [0029] as follows:

FIG. 1 is [[the]] a perspective view of an ablative baffle for a liquid rocket engine thrust chamber according to the present invention.

Please amend paragraph [0030] as follows:

FIG. 2 is [[the]] an exploded perspective view of FIG. 1.

Please amend paragraph [0031] as follows:

FIG. 3 is [[the]] a perspective view of a hub member according to the present invention.

Please amend paragraph [0047] as follows:

Furthermore, the inner center and outer center of radial end surface of connecting holes 12a and radial end surface of ignition flame inducing holes 12b are located at the inner and outer circumference surfaces of hub member 10, respectively, and a plurality of ignition flame inducing holes 12b [[is]] are located between connecting holes 12a.

Please amend paragraph [0050] as follows:

Preferably, the blade-connecting member 30 has a ring or ~~elliptic~~ elliptical shape.

Please amend paragraph [0052] as follows:

A heat resistant coating layer 32c using zirconia is formed on the inner surface of blade-connecting member 30 to prevent blade-connecting member 30 from heat damage by contact [[to]] with combustion gas of high temperature (refer to the enlarged cross sectional view of FIG. 2).

Please amend paragraph [0057] as follows:

The connecting holes 12a are [[a]] through-holes to which said blade rib member is connected at one end, and the ignition flame inducing holes 12b are through holes which make ignition flame generated at an initial igniter (not shown) be distributed well in a combustion chamber (not shown).

Please amend paragraph [0064] as follows:

A groove 32b is formed on the lower part of blade-connecting member 30, into which the head part and injector face of a liquid rocket engine thrust chamber are inserted to remove any interference with the welding part of injector face.

Please amend paragraph [0066] as follows:

Firstly, referring to FIG. 9, a pressure pulsation inside a combustion chamber is not damped as time goes by. Thus, this liquid rocket engine may cause the fatal problem of engine

failure by increase of resonance frequency as described above.

Please amend paragraph [0067] as follows:

Next, referring to FIG. 10, a pressure pulsation inside a combustion chamber of a liquid rocket engine having an ablative baffle for a liquid rocket engine according to the present invention is generated at the initial stage but damped remarkably as time goes by. Thus, the present invention fundamentally prevents such fatal problems as engine failure caused by the general liquid rocket engine, by means of damping the pressure pulsation inside combustion chamber in a short time, using an ablative baffle for a liquid rocket engine thrust chamber having a simple geometrical shape.

Please amend paragraph [0068] as follows:

FIGS. 11 and 12 are photographs showing states before and after the hot-fire combustion of liquid rocket engine having an ablative baffle for a liquid rocket engine thrust chamber according to the present invention. After the combustion, much soot is formed in the combustion chamber of the liquid rocket engine, but an ablative baffle for a liquid rocket engine thrust chamber according to the present invention is not damaged and maintains the shape set up initially.

Please amend paragraph [0070] as follows:

Firstly, the present invention does not use a conventional internal cooling method, but an ablation cooling method using the composite heat resistant material structure with a metal core, so that a liquid rocket engine system may be simplified, and the reliability of liquid rocket engine increases, and the manufacturing cost is cut down.

Please amend paragraph [0071] as follows:

Secondly, the present invention can reduce the combustion instability by damping pressure ~~pulsation~~ pulsations generated in the combustion chamber of a liquid rocket engine in a short time when a liquid rocket engine is ignited. Consequently, the present invention can prevent melting or the breakdown of baffles ~~baffle~~, breakdown of [[tank]] tanks, and so on caused by [[the]] combustion instability.

Please amend paragraph [0072] as follows:

Thirdly, the present invention enables an ablative baffle for a liquid rocket engine thrust chamber to be attached to and detached from the head part of liquid rocket engine thrust chamber without [[the]] structural change of the liquid rocket engine thrust chamber. Thus, when an ablative baffle is damaged in developing a liquid rocket engine, only the replacement of the ablative baffle is necessary without the re-manufacturing of the head part of a liquid rocket engine thrust chamber.